FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-7420
OLYMPIC PIPE LINE COMPANY

GENERAL INFORMATION	
Applicant	Olympic Pipe Line Company
Facility Name and Address	3201 Arbor Court Bellingham, WA 98226
Type of Facility	Groundwater Remediation
Facility Discharge Location	Section 8, T 28 N, R 3 E, SE 1/4, SW 1/4 Latitude: 48° 45' 0.65" N Longitude: 122° 25’ 53.6” W
Treatment Plant Receiving Discharge	City of Bellingham POTW
Contact at Facility	Name: Dana Carlisle, Geo Engineers Telephone #: (425) 861-6040
Responsible Official	Name: Tony Palagyi Project Manager

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INTRODUCTION

This fact sheet is a companion document to the Draft State Waste Discharge Permit No. ST 7420. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of pre-treated wastewater to the City of Bellingham's POTW. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities, which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information. Process Flow Diagrams are enclosed in Appendix B.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. Changes to the permit will be addressed in Appendix C—Response to Comments.

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Olympic Pipe Line Company has an underground 16-inch diameter pipeline which ruptured on June 10, 1999. Approximately 277,000 gallons of unleaded gasoline were released from the ruptured pipeline. The pipeline release on June 10, 1999, occurred in proximity to property occupied by the Bellingham Water Treatment Plant. The pipeline rupture occurred in immediate proximity to the Dakin-Yew Pump Station and within a complex network of underground utilities related to the water treatment plant. The product emerged from the pipeline to the ground surface, flowed overland to nearby Hannah Creek, and then followed Hannah Creek to enter Whatcom Creek, within the limits of Whatcom Falls Park. Ignition of the fuel occurred within the park, resulting in a fire that spread upstream to the source and downstream to the limits of the gasoline spill. Portions of the June 10 gasoline release entered the subsurface and became trapped within subsurface materials that include construction-related fill, native glacial deposits, stream sediments, and sedimentary bedrock.

Localized excavation of gasoline-contaminated soil at the site extended past August 1999 occurring intermittently in September and October 1999. During the removal of petroleum-contaminated soil, it was vital that the water pipelines remain operational and not be put at risk from excavation work. Therefore, it was not feasible to excavate some of the petroleum-contaminated soil located in the vicinity of pipelines, valves, and other related facilities. Furthermore, some of the gasoline migrated downward into fractured sandstone and siltstone. Remedial excavations did not extend downward into the bedrock units. Olympic Pipe Line Company proposes to provide both in-situ and above-ground remedial treatments for these areas.

PROPOSED REMEDIAL TREATMENT

In-situ remedial treatment is proposed which includes soil vapor extraction (SVE), dewatering and air sparging to mitigate residual gasoline in soil and groundwater in the vicinity of the gasoline release incident, surrounding the Dakin-Yew pump station and in the vicinity of the City of Bellingham water supply pipelines. The extracted vapor is oxidized by a catalytic oxidizer. The emissions from this unit are permitted through the North West Air Pollution Authority (NWAPA). Groundwater will be extracted from remediation wells RW-1, 3, DW/VE-3, RW-4, DW/VE-6, DW/VE-11, and DW/VE-16 (see Figures 1 and 2) and treated by an oil water separator and a three-tray air stripper unit prior to discharge to the City of Bellingham's sanitary sewer. The above-ground treatment system is depicted in Figure 3. Above-ground equipment associated with the remediation system will be located in a fenced enclosure. It is anticipated that portions of the above systems will remain operational for several years.

Olympic Pipe Line Company proposes that air sparging be used as a backup remedial approach depending upon the effectiveness of the oil water separation and vapor extraction system. The remediation well and piping infrastructure for air sparging will be installed in conjunction with installation of the vapor extraction and oil water separation systems.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the influent reported in the permit application is based on an average of groundwater samples collected between August and September 1999, as follows:

Based on a Flow of 10 gpm
With Treatment Efficiency of 99.99%

Parameter	Influent Concentration (µg/L)	Expected Effluent Concentration[2] (µg/L)
Benzene	8,087	0.81
Ethybenzene	1,643	0.16
Toluene	25,368	2.54
Xylenes	13,459	1.35
TPH-G	173,294	17.33

Based on a Flow of 50 gpm

Parameter	Influent Concentration (µg/L)	Proposed Treatment Efficiency[1] (%)	Expected Effluent Concentration[2] (µg/L)
Benzene	8,087	99.95	4.04
Ethybenzene	1,643	99.97	0.49
Toluene	25,368	99.66	86.26
Xylenes	13,459	99.97	4.04
Gasoline (TPH-G)	173,294	99.95	86.65

[1]Treatment efficiency based on manufacturer information.
[2]Effluent concentrations are predicted theoretical concentrations based on the information provided by the manufacturer.

PERMIT STATUS

This is a new facility. An application for a permit was submitted to the Department on November 1, 1999. Amendment to the application was received on December 2, 1999. The application was accepted by the Department on December 7, 1999.

SEPA COMPLIANCE

A SEPA checklist was submitted to North West Air Pollution Authority (NWAPA) for the proposed remediation project. A Determination of Non-Significance was granted by NWAPA on November 18, 1999.

POTW's RECEIVING WATER

The treated groundwater will be ultimately discharged to Bellingham Bay after receiving secondary treatment from the Bellingham POTW's Sewage Treatment Plant. The Bellingham POTW is regulated under NPDES Permit No. WA-002374-4 for their secondary treatment oxygen activated sludge plant. The plant has a design capacity of 37 MGD for secondary treatment and it is currently operating at an average flow of the maximum month of 20 MGD.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The minimum requirements to demonstrate compliance with the AKART standard and specific design criteria for this facility were determined in the submitted permit application package on November 1, 1999.

The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). The Department has determined that the proposed wastewater is similar in characteristics to the wastewater from Leaking Underground Storage Tank (LUST) Cleanup Sites. Therefore, the technology-based standards for LUST Cleanup sites have been applied to Olympic Pipe Line Company's discharge. The following limitations are necessary to satisfy the requirement for AKART:

Flow	36,000 gpd
Benzene	5 µg/L
TPH-G	1.0 mg/L
BTEX	100 µg/L

BTEX means Benzene, Toluene, Ethyl Benzene, and total Xylenes.

Based on the flow summary data (Table 7) appearing in OPL's Supplemental Remedial Action Report dated February 29, 2000, as well as the discharge characteristics of the proposed remedial system, the discharge flow limitation is set at 36,000 gpd.

The TPH-G data presented on the same report and the submitted application both indicate that the proposed system is capable of removing TPH-G to a range of 50 to 200 µg/L. However, more data is needed to verify this. Until this performance can be verified, the Department proposes that the TPH-G limit be set at 1 mg/L. The Department will re-evaluate this limit in approximately 12 months following the issuance of the permit. If data continues to indicate that the system is capable of achieving TPH-G concentrations in the same range as indicated above (50 to 200 ppb), the Department may modify the permit limit to a performance-based limit.

No effluent limit for lead is set at this time. Monitoring-only is required.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the City of Bellingham's POTW (POTW) from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary.

These limitations are based on local limits established by the POTW and codified in ordinance. Applicable limits for this discharge include the following:

pH	between 6 and 10 standard units

Pollutant concentrations in the proposed discharge with technology-based controls in place will not cause problems at the receiving POTW such as interference, pass-through or hazardous exposure to POTW workers nor will it result in unacceptable pollutant levels in the POTW’s sludge.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies takes into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify appropriate reporting and record keeping requirements to prevent and control waste discharges [WAC 273-216-110 and 40 CFR 403.12 (e),(g), and (h)].

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S4. as authorized under RCW 90.48.110, WAC 173-220-150, chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations.

SPILL PLAN

The Permittee may be storing a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent accidental releases under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs.

GROUND WATER QUALITY EVALUATION

In accordance with WAC 173-200-080, the permit requires the Permittee to prepare and submit an annual ground water quality report for departmental review. The report shall document in plan view the benzene ground water contamination plume and shall contain an evaluation of the effectiveness of the treatment system.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes, or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. To be consistent with statewide planning efforts, the Department proposes that the permit be issued for a period of 5 years. Therefore, this permit will be issued with an expiration date of March 31, 2005.

REFERENCES FOR TEXT AND APPENDICES

1. EPA Report, EPA/600/2-88/014. A selective guide for volatization technologies for water treatment.

2. State Waste Discharge Permit Application submitted by Olympic Pipe Line Company on November 1, 1999.

3. State Waste Discharge Permit Program, Chapter 173-216, May 1988.

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a new permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on December 24 and 31, 1999, in *The Bellingham Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on March 31, 2000, in *The Bellingham Herald* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 - 160th Avenue SE
Bellevue, WA 98008-5472

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, 425-649-7201 or by writing to the address listed above.

This permit and fact sheet were written by Jeanne Tran, P. E.

APPENDIX B

PROCESS FLOW DIAGRAM

APPENDIX C

RESPONSE TO COMMENTS